REMARKS

Applicants affirm their election, with traverse, to prosecute the invention of Group I Claims 1-22 and 26-29. For the reasons hereinafter discussed, however, it is respectfully submitted that neither the Madeleine reference, nor other references relied upon in rejecting these claims, discloses or suggests applicants product, whereby Claims 23-25 should be allowable with Claims 1-22 and 26-29. Claims 23-25 are retained in the application pending further consideration of the Group I claims.

Claims 1-12, 15, 22 and 26-29 were rejected under 35 U.S.C. § 103(a) over the Madeleine reference. Claim 1 is the only independent product claim in the application. It has been amended to more clearly define over the prior art relied upon. Applicants request reconsideration of these rejections for the reasons hereinafter set out.

The block copolymer of the Claim 1 invention is an acrylic block copolymer (A) comprising a methacrylic polymer block (a) and an acrylic polymer block (b). The copolymer has a molecular weight of 30000 to 500000 for (primarily) improving mechanical properties and processing characteristics, as discussed at page 13, line 21 to page 14, line 4 of the specification. In addition the block copolymer has an acid anhydride group as a functional group, and the content of the acid anhydride group is 0.1% by weight, so the block copolymer has excellent heat resistance, thermal decomposition resistance, rubber elasticity at high temperatures, oil resistance, cohesive force, and compression set, as discussed at page 19, line 16 to page 20, line 17 of the specification. The ratio (Mw/Mn) of the weight-average molecular weight (Mw) to the number-average molecular weight (Mn) according to gel permeation chromatographic measurement, is 1 to 1.8, which improves the uniformity of the block copolymer, as discussed at page 14, lines 5 to 11 of the specification.

In contrast, the Madeleine reference discloses a toner composition containing a block copolymer of the type AB, BAB, ABA. Madeleine also discloses that methacrylate or acrylate is preferred as monomers for the A block of the copolymer and methacrylate is preferred as monomers for the B block of the copolymer. However, in Madeleine the block copolymer is used as an additive to improve compatibility with a toner resin and give higher triboelectric charging. There is no description or suggestion of the block

copolymer described in amended Claim 1 to achieve the effects of the present invention. As such, applicants submit that a skilled practitioner could not be taught by Madeleine to make the block copolymer of Claim 1, and would not obtain applicant's results without undue experimentation.

Claims 1-16, 18-22 and 26-29 were rejected under 35 U.S.C. § 102(b) and/or 35 U.S.C. § 103(a) over Miyashita et al. Miyashita et al. discloses an adhesive containing a polymer with an acrylate-methacrylate block copolymer and a process for producing the polymer. The polymer is not produced by controlled polymerization, but by free radical polymerization. In general, the ratio (Mw/Mn) of the weight-average molecular weight (Mw) to the number-average molecular weight (Mn) of a polymer produced by non-controlled polymerization is large, and the polymer could not have a ratio (Mw/Mn) of the weight-average molecular weight to the number-average molecular weight of 1 to 1.8. Moreover, Example 1, describes extrusion of a polymer with an extruder. Furthermore, Miyashita et al. does not describe a polymer with an acid anhydride group. As a matter of fact, a polymer with an acid anhydride group is not generally obtained only by treating the polymer with an extruder, as shown in Comparative Examples 8-10 of the present application. The polymer must contain a reactive monomer, i.e. tert-butyl (meth)acrylate. In other words, anhydride functionality is not inherently produced in the referenced example of Miyashita et al.

As shown in Tables 1-4 of the present application, the block copolymer having an acid anhydride group of the invention has excellent mechanical properties, heat resistance, compression set, ad thermal decomposition resistance. In particular, the block copolymer of the present invention is excellent in compression set at high temperatures compared to block copolymers without an acid anhydride group. Miyashita et al. neither discloses nor suggests the effect of an acid anhydride group.

Finally, regarding the monomers of Claims 13-15, Miyashita et al. does disclose a number of monomers in paragraph 30. However, there is no description of the effects, which applicants' invention achieves, i.e., improving oil resistance, of n-butyl acrylate, ethyl acrylate, and 2-methoxyethyl acrylate.

Thus, applicants submit the applicants' invention would not be suggested to a skilled practitioner of the art by Miyashita et al. Neither the claimed specific block copolymer nor its salutary properties are described or suggested in this reference.

Claims 1-12, 16, 18-22 and 26-29 were also rejected under 35 U.S.C. § 103(a) over Kazuhiko et al. Kazuhiko et al. discloses a sheet comprising acrylate-(meth)acrylate block copolymers and a process to produce the copolymer. But there is neither description nor suggestion of the polymer with an acid anhydride group. As previously pointed out, the polymer with an acid anhydride group is not generally obtained only by treating the polymer by an extruder, and anhydride functionality is not inherently produced in the reference example of Kazuhiko et al. Accordingly, one of ordinary skill in the art could not find the present invention described or suggested by Kazuhiko et al.

With respect to rejections based on Kaneda et al. and Matyjaszewski et al., translations of the foreign priority documents for the present application are submitted herewith. As such, these references do not constitute prior art to the claimed inventions and applicants request that the rejections be withdrawn.

Finally, applicants submit terminal disclaims with respect to copending U.S. Patent Applications Ser. No. 10/477,868 and Ser. No. 10/503,024. Withdrawal of the provisional double patenting rejections (obviousness-type) is, accordingly, in order.

It is respectfully submitted that Claim 1 (and all of its dependent claims) should now be in condition for allowance. Passage of the application to issue is requested.

Respectfully submitted,

Richard G. Lione
Reg. No. 19,795
Attorney for Applicant(s)

BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, Illinois 60610
(312) 321-4200